SIEMENS

Array LED
2 mm LED, Diffused

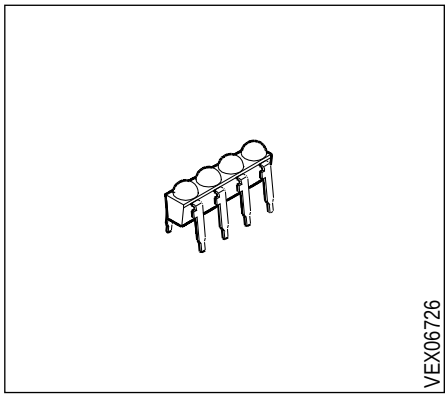
LR Z18 x, LY Z181, LG Z18 x

Besondere Merkmale

- eingefärbtes, diffuses Gehäuse
- als optischer Indikator einsetzbar
- als Mehrfachzeile verfügbar
- Störimpulsfest nach DIN 40839

Features

- colored, diffused package
- for use as optical indicator
- available as multiple array (LED)
- load dump resistant acc. to DIN 40839



Typ Type	Anzahl der Lichtpunkte Number of Dots	Emissionsfarbe Color of Emission	Gehäusefarbe Color of Package	Lichtstärke Luminous Intensity I_F = 10 mA I_V (mcd)	Bestellnummer Ordering Code
LR Z181-CO	1	red	red diffused	≥ 0.25	Q62703-Q1495
LR Z182-CO	2	red	red diffused	≥ 0.25	Q62703-Q1496
LR Z183-CO	3	red	red diffused	≥ 0.25	Q62703-Q1497
LR Z184-CO	4	red	red diffused	≥ 0.25	Q62703-Q1498
LR Z185-CO	5	red	red diffused	≥ 0.25	Q62703-Q1499
LR Z186-CO	6	red	red diffused	≥ 0.25	Q62703-Q1500
LR Z187-CO	7	red	red diffused	≥ 0.25	Q62703-Q1501
LR Z188-CO	8	red	red diffused	≥ 0.25	Q62703-Q1502
LR Z189-CO	9	red	red diffused	≥ 0.25	Q62703-Q1503
LR Z180-CO	10	red	red diffused	≥ 0.25	Q62703-Q1504
LY Z181-CO	1	yellow	yellow diffused	≥ 0.25	Q62703-Q1505
LG Z181-CO	1	green	green diffused	≥ 0.25	Q62703-Q1506
LG Z182-CO	2	green	green diffused	≥ 0.25	Q62703-Q1507
LG Z183-CO	3	green	green diffused	≥ 0.25	Q62703-Q1508
LG Z184-CO	4	green	green diffused	≥ 0.25	Q62703-Q1509
LG Z185-CO	5	green	green diffused	≥ 0.25	Q62703-Q1510
LG Z186-CO	6	green	green diffused	≥ 0.25	Q62703-Q1511
LG Z188-CO	8	green	green diffused	≥ 0.25	Q62703-Q1513
LG Z180-CO	10	green	green diffused	≥ 0.25	Q62703-Q1515

Streuung der Lichtstärke in einer Verpackungseinheit $I_{V\,max} / I_{V\,min} \leq 2.0$.
Luminous intensity ratio in one packaging unit $I_{V\,max} / I_{V\,min} \leq 2.0$.

Grenzwerte
Maximum Ratings

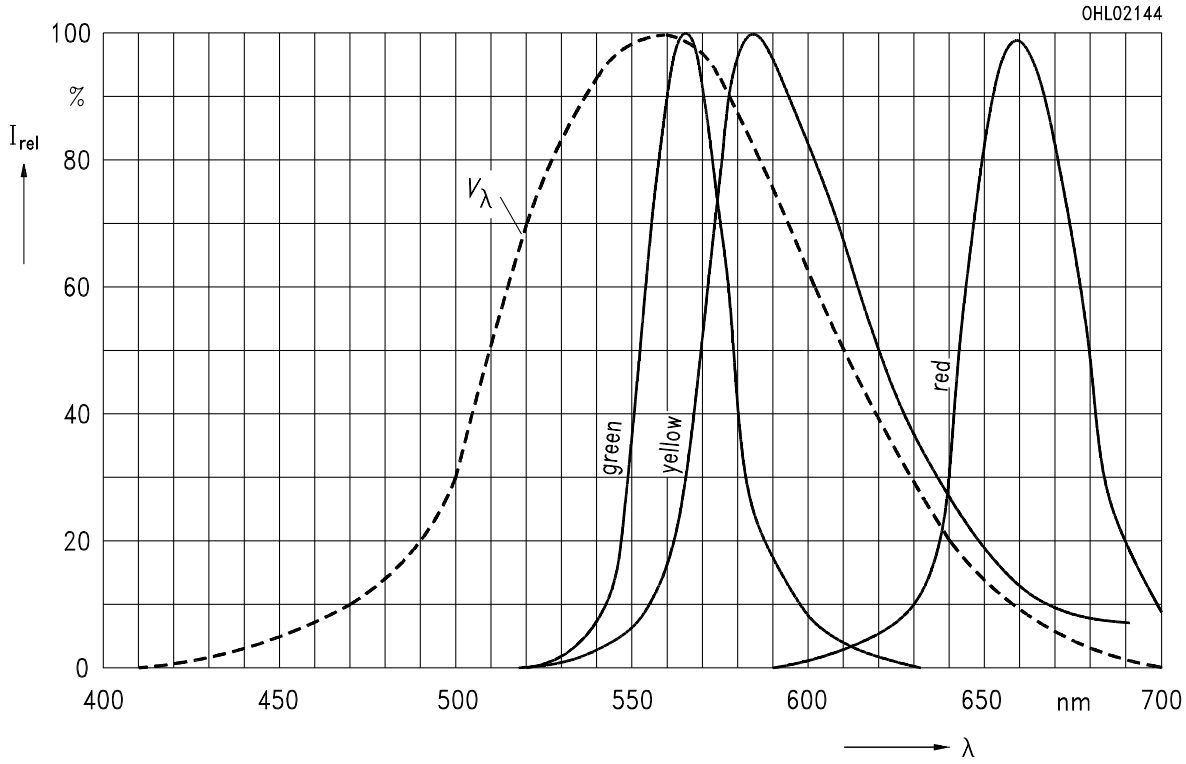
Bezeichnung **Parameter**	**Symbol** **Symbol**	**Werte** **Values**	**Einheit** **Unit**
Betriebstemperatur Operating temperature range	T_{op}	– 40 … + 80	˚C
Lagertemperatur Storage temperature range	T_{stg}	– 40 … + 80	˚C
Sperrschichttemperatur Junction temperature	T_j	+ 100	˚C
Durchlaßstrom Forward current	I_F	30	mA
Stoßstrom Surge current $t \leq 10$ µs, D = 0.005	I_{FM}	0.5	A
Sperrspannung Reverse voltage	V_R	5	V
Verlustleistung Power dissipation $T_A \leq 25$ ˚C	P_{tot}	80	mW
Wärmewiderstand Thermal resistance Sperrschicht / Luft Junction / air	$R_{th\ JA}$	750[1)]	K/W

1) Auf Platine gelötet: Lötfläche ≥ 16 cm².
1) Soldered on PC board: pad size ≥ 16 cm².

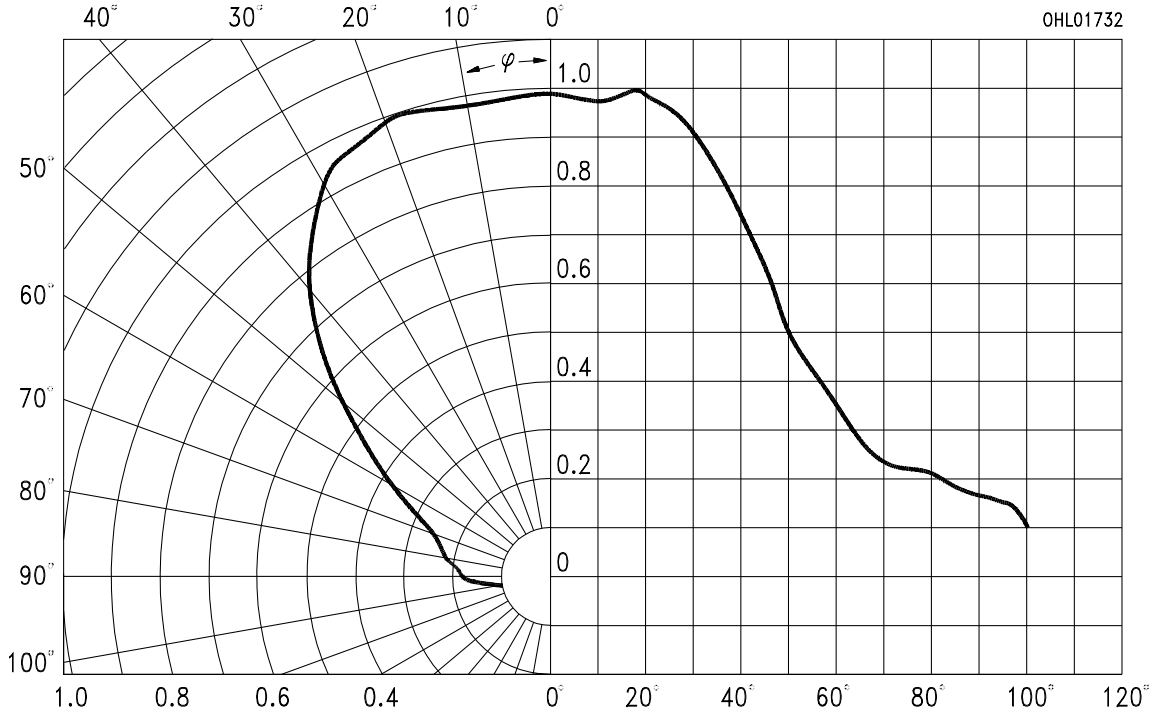
Kennwerte (T_A = 25 ˚C)
Characteristics

Bezeichnung **Parameter**	**Symbol** **Symbol**	**Werte** **Values**			**Einheit** **Unit**
		LR	**LY**	**LG**	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) I_F = 20 mA	λ_{peak}	660	586	565	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) I_F = 20 mA	λ_{dom}	645	590	570	nm
Spektrale Bandbreite bei 50 % $I_{rel\ max}$ (typ.) Spectral bandwidth at 50 % $I_{rel\ max}$ (typ.) I_F = 20 mA	$\Delta\lambda$	35	45	25	nm
Abstrahlwinkel bei 50 % I_V (Vollwinkel) Viewing angle at 50 % I_V	2φ	100	100	100	Grad deg.
Durchlaßspannung (typ.) Forward voltage (max.) I_F = 10 mA	V_F V_F	1.6 2.0	2.0 2.6	2.0 2.6	V V
Sperrstrom (typ.) Reverse current (max.) V_R = 5 V	I_R I_R	0.01 10	0.01 10	0.01 10	µA µA
Kapazität (typ.) Capacitance V_R = 0 V, f = 1 MHz	C_0	25	10	15	pF
Schaltzeiten: Switching times: I_V from 10 % to 90 % (typ.) I_V from 90 % to 10 % (typ.) I_F = 100 mA, t_P = 10 µs, R_L = 50 Ω	 t_r t_f	 120 50	 300 150	 450 200	 ns ns

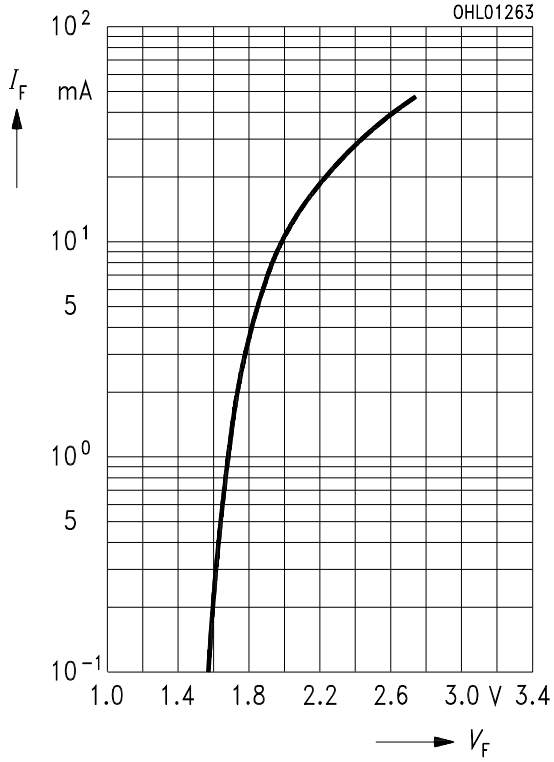
Relative spektrale Emission $I_{rel} = f(\lambda)$, T_A = 25 ˚C, I_F = 20 mA
Relative spectral emission
V (λ) = spektrale Augenempfindlichkeit
Standard eye response curve



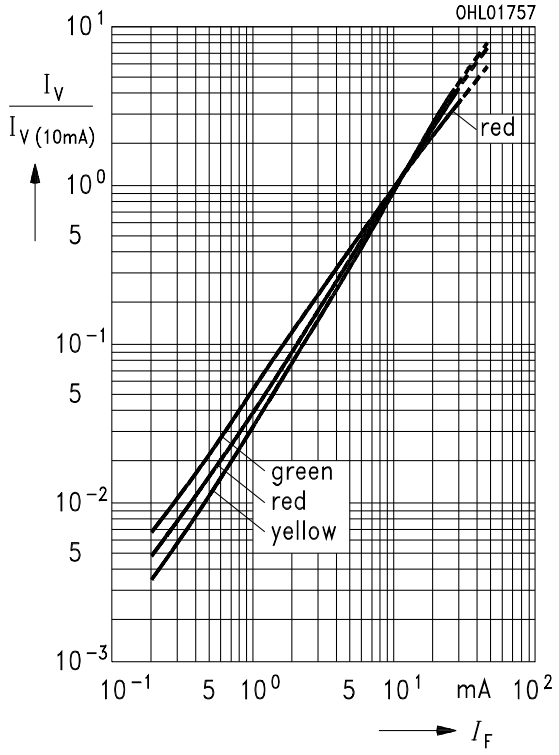
Abstrahlcharakteristik $I_{rel} = f(\varphi)$
Radiation characteristic



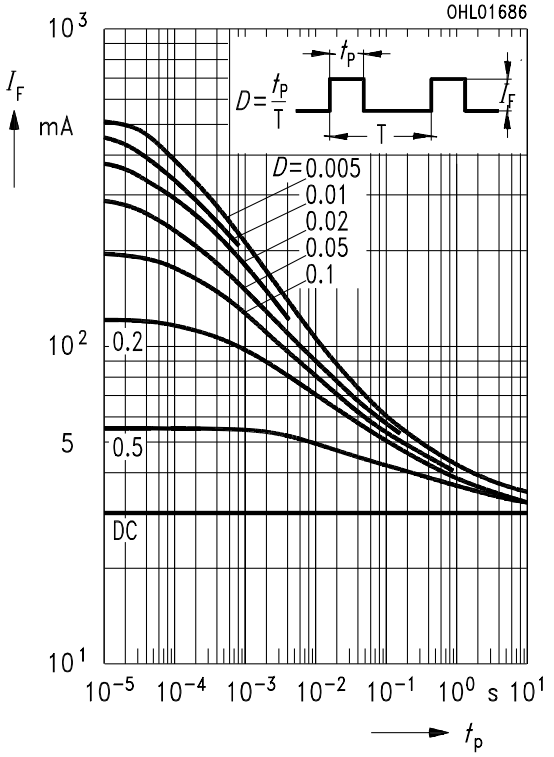
Durchlaßstrom $I_F = f(V_F)$
Forward current
T_A = 25 ˚C



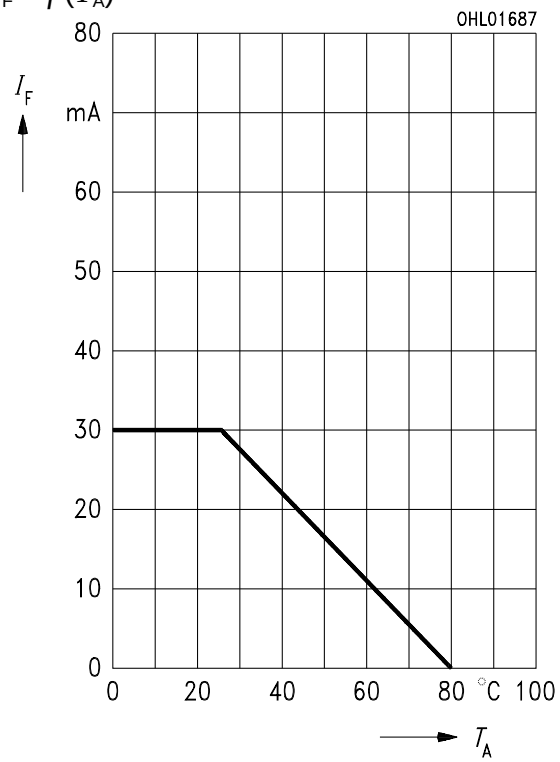
Relative Lichtstärke $I_V/I_{V(10\ mA)} = f(I_F)$
Relative luminous intensity
T_A = 25 ˚C



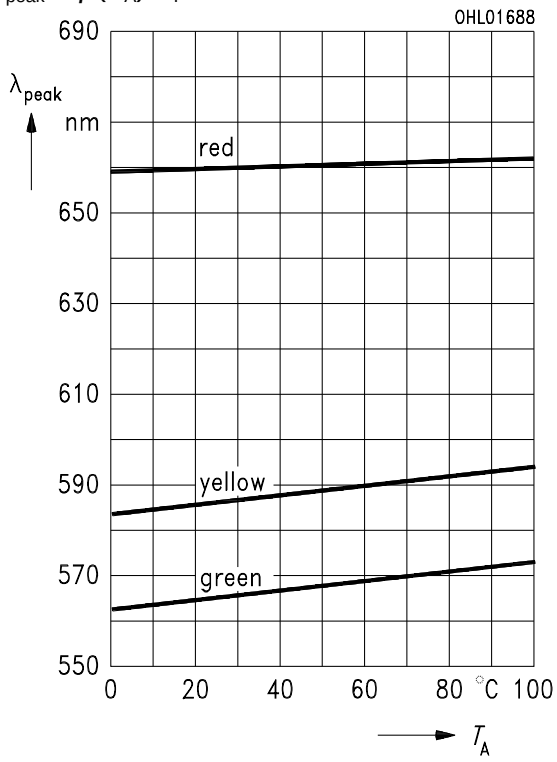
Zulässige Impulsbelastbarkeit $I_F = f(t_P)$
Permissible pulse handling capability
Duty cycle D = parameter, T_A = 25 ˚C



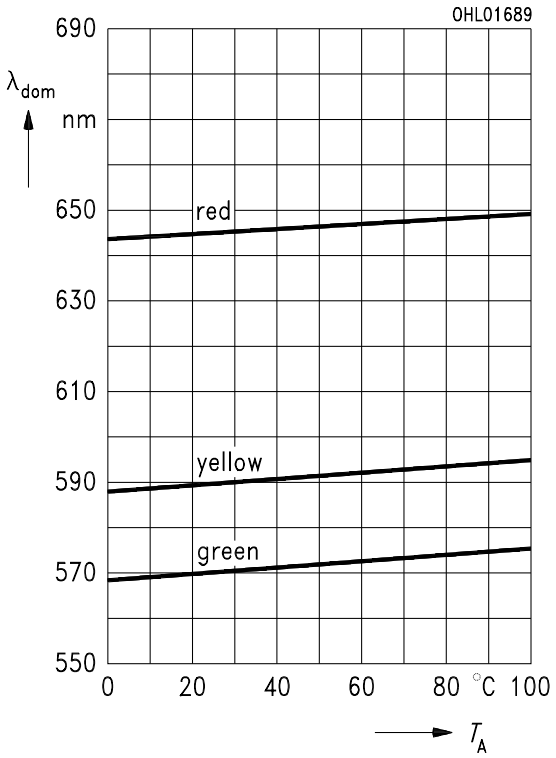
Maximal zulässiger Durchlaßstrom
Max. permissible forward current
$I_F = f(T_A)$



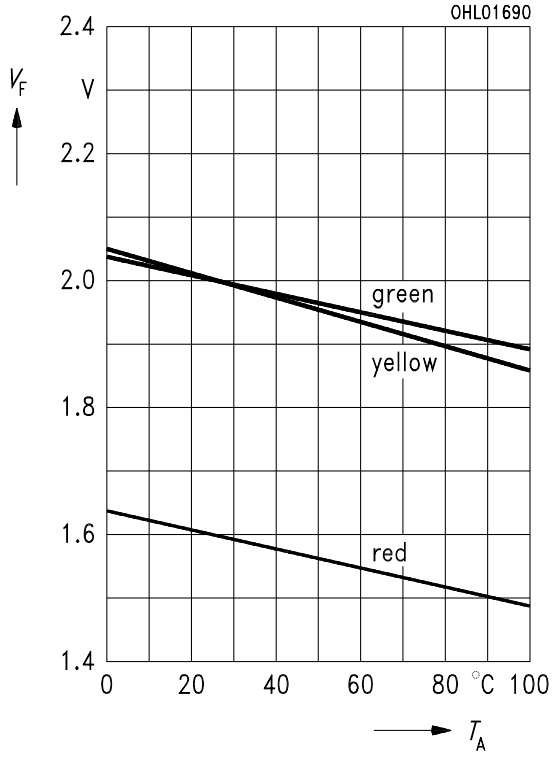
Wellenlänge der Strahlung
Wavelength at peak emission
$\lambda_{peak} = f(T_A)$, I_F = 20 mA



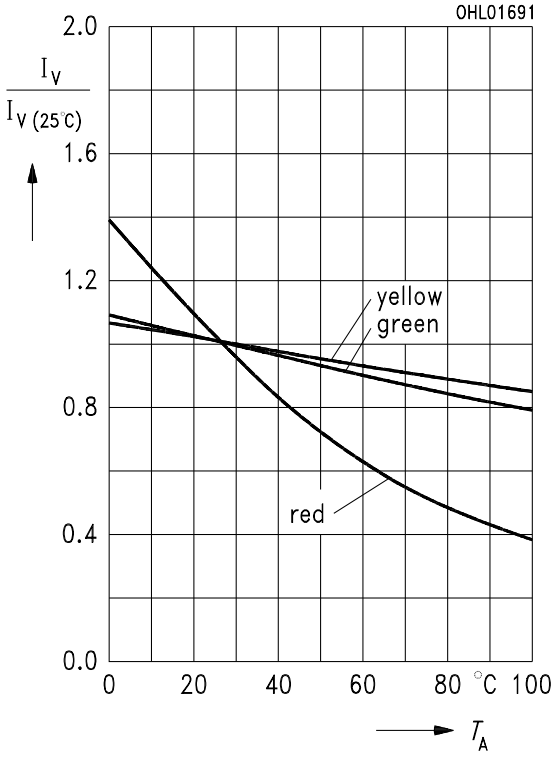
Dominantwellenlänge
Dominant wavelength
$\lambda_{dom} = f(T_A)$, I_F = 20 mA



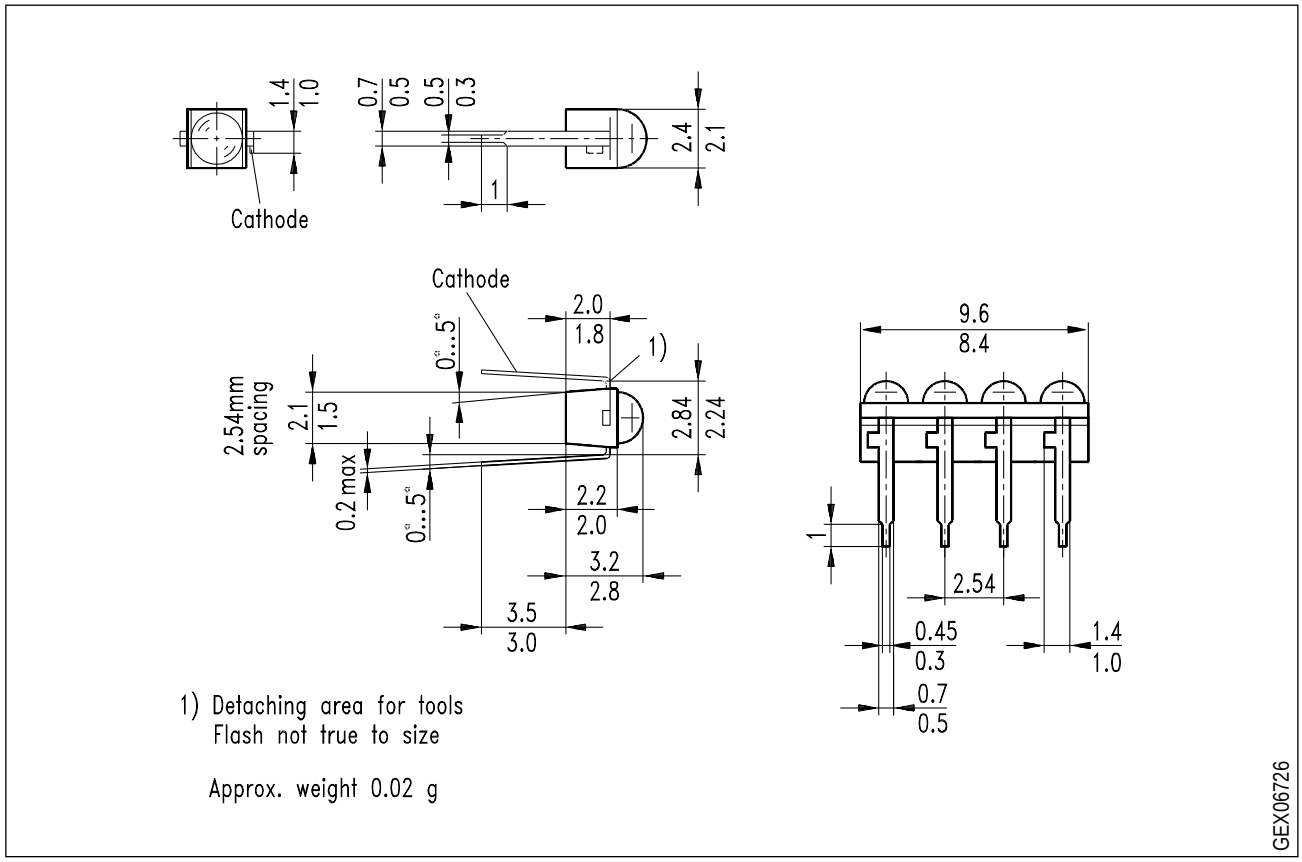
Durchlaßspannung $V_F = f(T_A)$
Forward voltage
I_F = 10 mA



Relative Lichtstärke $I_V/I_{V(25\,°C)} = f(T_A)$
Relative luminous intensity
I_F = 10 mA



Maßzeichnung (Maße in mm, wenn nicht anders angegeben)
Package Outlines (Dimensions in mm, unless otherwise specified)



Kathodenkennzeichnung: Breiterer Lötspieß
Cathode mark: Broad solder lead

Zeile mit 4 Dioden (z. B. LR Z184)
Row with 4 diodes (e. g. LR Z184)